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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
METZMAIER, DANIEL S	

ART UNIT	PAPER NUMBER
1712	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/820,844	YAMATE, TETSURO	
	Examiner	Art Unit	
	Daniel S. Metzmaier	1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 June 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 5-16 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 5-16 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claims 5-16 are pending.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12 June 2007 has been entered.

Claim interpretation

2. The claims employ the language: "included and "containing". Said terms have been interpreted to have the same scope as "comprising". See MPEP 2111.03. It is noted that none of the claims define any concentrations.

The claimed compositions, claims 5-9, set forth a proviso that "wherein the chemiluminescent composition induces chemiluminescence when being mixed with an oxidizing composition comprising hydrogen peroxide". The claims employ open transitional language, i.e., "comprising". Said compositions read on intermediate compositions employing both the oxalate/fluorescent component and the activator component since the addition of more activator would be expected to induce some chemiluminescence and the claims do not define the degree of extent said compositions induce the chemiluminescence.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 10-16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. It is unclear where applicants provide *ipso verba* basis for a device having separate components as now claimed in claims 10-16.

Original claim 1 does not define a device *per se*. Applicants have not point out the disclosure of a device and the examiner is unable to find the characterization of a device in the original specification disclosing compositions.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

6. Claims 5-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant has amended claim 5 to employ the intermediate transitional language, i.e., "consisting essentially of", but claim 5 employs "containing" to define the solvent. Claim 6 sets forth a further solvent component and employs open transitional language, i.e., "comprises". The metes and bounds of the

claims are indefinite since the subject matter set forth in the claims is inconsistently claimed.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 6-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Cranor, US 7,052,631. See example 4.

9. Claims 6-14 are rejected under 35 U.S.C. 102(a) as being anticipated by Cranor, US PGPUB 2003/0102467. See example 4.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claim 5-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cranor, US 7,052,631, or US PGPUB 2003/0102467, individually as applied to claims 5-

14 above, and further in view of Zweig et al, US 3,729,426; Roberts et al, US 3,701,738; and/or Crigg, US 3,560,395.

Cranor (example 4) discloses compositions reading con the oxalate portion of the two part chemiluminescent composition.

Cranor differs from the claims in employing t-butanol and glycol alkyl ether acetates in the oxidizer portion of the two part chemiluminescent composition.

Zweig et al (abstract; column 7, lines 36 et seq; and column 9, lines 1-23) and Roberts et al (abstract; column 5, lines 34; and column 6, lines 4-25) disclose chemiluminescent compositions and suitable solvents therefore. Zweig et al (column 7, line 43; and column 9, lines 1-5 and 16-23) and Roberts et al (column 5, line 40; and column 6, lines 4-8 and 18-24) disclose the use of ethylene glycol monoalkyl acetate as typical solvent employed in the chemiluminescent system as well as ester solvents taught in the Omniglow reference as suitable solvents.

Crigg discloses aqueous peroxide compositions. Crigg (column 4, lines 18 et seq) discloses organic liquid solvents that may be employed in the peroxide solutions include t-butyl alcohol, ether-ester solvents including methyl "Cellosolve" acetate (ethylene glycol monomethyl ether acetate, also known as 2-methoxyethyl acetate), Butyl "Cellosolve" acetate, and Butyl "Carbitol" acetate among other solvents common to Omniglow Corporation, Zweig et al, and the Roberts et al references.

These references are combinable because they teach chemiluminescent compositions and solvents therefore. It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ t-butyl alcohol with

conventional ether-ester solvents including methyl "Cellosolve" acetate (ethylene glycol monomethyl ether acetate, also known as 2-methoxyethyl acetate), Butyl "Cellosolve" acetate, and/or Butyl "Carbitol" acetate as obvious functional equivalent solvents in the Omniglow Corporation activator solutions for the advantage of producing a phthalate free peroxide activator solution.

Since the solvents were known in the art for use in either chemiluminescent systems and/or in conventionally known peroxide compositions, it would have been obvious to one having ordinary skill in the art at the time of applicants invention to employ said solvents as suitable solvent and/or diluents in the Omniglow Corporation peroxide activator or oxalate/fluorescent component solutions. While applicant's examples show the particular solvent system functions, applicant examples do not show the activator compositions to have unexpected properties. It is further noted that the claims are absent of any concentrations and would not exclude the use of mixtures, which at least the Cranor reference clearly contemplates. Said claims would require only small amounts of the art disclosed solvents.

12. Claims 5-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Omniglow Corporation, WO 94/19421, as applied to claims 5-6 above, and further in view of Zweig et al, US 3,729,426; Roberts et al, US 3,701,738; and/or Crigg, US 3,560,395. Omniglow Corporation (examples, tables and claims) discloses the use of cetyl citrate esters with benzoates (WO '421, claims 1 and 6).

Said compositions read on intermediate compositions employing both the oxalate/fluorescent component and the activator component since the addition of more

activator would be expected to induce some chemiluminescence and the claims do not define the degree of extent said compositions induce the chemiluminescence.

Omniglow Corporation differs from the claims in the use of acetyl citrate ester solvent system for the oxalate/fluorescent component or the use of ethylene glycol monoalkyl ether acetate or diethylene glycol monoalkyl ether acetate in claim 15 or ethylene glycol monobutyl ether acetate (also known as Butyl CELLOSOLVE® acetate) or diethylene glycol monobutyl ether acetate (also known as Butyl Carbitol acetate) in claim 16 for the use of phthalate esters in the activator solution.

Omniglow Corporation (page 7, lines 16 et seq) disclose the oxalate/fluorescent component is generally diluted in a suitable solvent and said solvent systems may comprise a phthalate-free oxalate/fluorescent component for a completely phthalate-free chemiluminescent device. Omniglow specifically mentions but does not limit thereto the use of butyl benzoate as a preferred oxalate/fluorescent component solvent.

Omniglow Corporation (page 4, lines 17-22) disclose the phthalate free activators solutions employ solvents that possess good peroxide solubility.

It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ the mutual solvent system for the activator and the oxalate/fluorescent component for the formation of a completely phthalate-free chemiluminescent device.

Zweig et al (abstract; column 7, lines 36 et seq; and column 9, lines 1-23) and Roberts et al (abstract; column 5, lines 34; and column 6, lines 4-25) disclose chemiluminescent compositions and suitable solvents therefore. Zweig et al (column 7,

line 43; and column 9, lines 1-5 and 16-23) and Roberts et al (column 5, line 40; and column 6, lines 4-8 and 18-24) disclose the use of ethylene glycol monoalkyl acetate as typical solvent employed in the chemiluminescent system as well as ester solvents taught in the Omniglow reference as suitable solvents.

Crigg discloses aqueous peroxide compositions. Crigg (column 4, lines 18 et seq) discloses organic liquid solvents that may be employed in the peroxide solutions include t-butyl alcohol, ether-ester solvents including methyl "Cellosolve" acetate (ethylene glycol monomethyl ether acetate, also known as 2-methoxyethyl acetate), Butyl "Cellosolve" acetate, and Butyl "Carbitol" acetate among other solvents common to Omniglow Corporation, Zweig et al, and the Roberts et al references.

These references are combinable because they teach chemiluminescent compositions and solvents therefore. It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ t-butyl alcohol with conventional ether-ester solvents including methyl "Cellosolve" acetate (ethylene glycol monomethyl ether acetate, also known as 2-methoxyethyl acetate), Butyl "Cellosolve" acetate, and/or Butyl "Carbitol" acetate as obvious functional equivalent solvents in the Omniglow Corporation activator solutions for the advantage of producing a phthalate free peroxide activator solution.

Since the solvents were known in the art for use in either chemiluminescent systems and/or in conventionally known peroxide compositions, it would have been obvious to one having ordinary skill in the art at the time of applicants invention to employ said solvents as suitable solvent and/or diluents in the Omniglow Corporation

peroxide activator or oxalate/fluorescent component solutions. While applicant's examples show the particular solvent system functions, applicant examples do not show the activator compositions to have unexpected properties. It is further noted that the claims are absent of any concentrations and would not exclude the use of mixtures, which at least the Omniglow reference clearly contemplates. Said claims would require only small amounts of the art disclosed solvents.

Response to Arguments

13. Applicant's arguments filed 12 June 2007 have been fully considered but they are not persuasive.

14. Applicants' substituted specification has been entered.

15. It is noted, any alleged evidence of unexpected results are not probative for a rejection under anticipation.

16. Applicants (page 7 of response) assert the specification discloses prior art use of bar-shaped chemiluminescent devices at page 1, lines 13 of the original specification. Said description is deemed prior art description and not part of applicant's invention *per se*.

Applicants further assert the original specification at page 3, line 25, to page 4, line 5, describes a composition of acetyl tributyl citrate (ATBC) and the oxidizing liquid are separately stored before use and are mixed when inducing chemiluminescence. This has not been deemed persuasive because the cited specification fails to set forth any storage element as asserted by applicant and the original specification fails to set

forth as device as claimed in claim 10. To the extent said oxidizing component were stored separately, said alleged recitation is not a device as claimed in claims 10-16.

17. Applicants (page 8) assert the amended language, i.e., "consisting essentially of", and the activator component materially affects the basis and novel characteristics of the invention as recited in claims 5 and 6. Although the anticipation rejection has been withdrawn due to the amendment incorporating the acetyl tributyl citrate species, the amendment of the transitional language has not been deemed persuasive. Differences in performance alone do not necessarily constitute a material affect. Some differences based on solvent types, concentrations, oxalate species and fluorescence species would have been expected. No single claim defines all these parameters.

18. Applicants (pages 8 and 9) assert replacing the phthalates in the activator components as shown in the declaration under 37 CFR 1.132 showing unexpected results based on accelerated aging. This has not been deemed persuasive for the following reasons:

The results are not commensurate in scope and applicant has not set forth why said data would be extrapolated to the full scope of the claims, which lack concentration, (with the exception of 9 and 14) a specific oxalate species, a specific fluorescent material.

The Omniglow reference employs a number of solvents and some variation would clearly be expected. Applicant has not shown said results to be unexpected. A difference alone is not evidence of unexpected results but the difference must be shown to be significant and unobvious.

Furthermore, the single comparative example has not been shown to be statistically significant. Differences alone are inadequate to establish nonobviousness; the differences must be statistically significant, unexpected and of practical significance. See, for example, In re Merck & Co. Inc., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986); In re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); In re Freeman, 474 F.2d 1318, 177 USPQ 139 (CCPA 1973).

Lastly, any alleged evidence of unexpected results are not probative for a rejection under anticipation.

19. Applicants (page 10) further assert the declaration evidence shows comparative performance and should be considered unexpected since Omniglow lacks a citrate in the oxalate/fluorescent component but teaches citrate for the activator component. This has not been deemed persuasive since Omniglow clearly suggest the use of citrates in the oxalate/fluorescent component and applicant's evidence does not rebut said suggestion for the reasons already addressed.

Furthermore, applicant's (pages 9 and 10) arguments regarding the lack of an example in the Omniglow reference to citrates in the oxalate component have not been deemed persuasive since all disclosures in a reference must be considered for what it fairly teaches those of ordinary skill in the art, not just preferred embodiments or specific working examples. In re Boe, 355 F2d 961, 148 USPQ 507, (CCPA, 1966). In re Chapman, 357 F2d 418, 148 USPQ 711, (CCPA, 1966). In re Mills, 470 F2d 649, 176 USPQ 196, (CCPA, 1972). Omniglow clearly teaches and suggest phthalate free combinations as well as citrate solvents therefore.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Metzmaier whose telephone number is (571) 272-1089. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Daniel S. Metzmaier
Primary Examiner
Art Unit 1712

DSM